

DETAILED ACTION

Remarks

This Office Action fully acknowledges Applicant's remarks filed on September 11th, 2009. Claims 1-3,5-18,20-25,27-39 and 41-45 have been allowed.

Interview Summary

On Monday, December 14th, 2009 the Examiner initiated an interview with Applicant to discuss proposed amendments to the claims that would place the claims in condition for allowance. Examiner and Applicant came to agreement on claim amendments that would place the claims in condition for allowance and Examiner agreed to enter such amendments by way of an Examiner's Amendment.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Charles Gagnebin on December 14th, 2009.

The application has been amended as follows:

In the claims-

2. An assay system comprising:

first and second reflective surfaces that are structured and arranged to provide a channel therebetween, to accommodate a fluid having material to be tested;

a plurality of regions in a pattern of an array between said first and surfaces, each region defining a cavity and ~~adapted to receive~~ having a capturing material on one of the first and second surfaces therein;

a source of wavelength scanned radiation to illuminate each region at a wavelength adapted to provide a transmission of that radiation within each said cavity representative of material from said fluid bound to said capturing material;

a detector for the transmitted radiation in each said cavity and operative to indicate ~~the~~ a level of binding by said capturing material ~~of~~ to said material to be tested in said fluid within each said cavity; and

means for dynamically varying spacing of said first and second surfaces.

23. A method for assaying a material under test, the method comprising:

providing a channel bounded by first and second reflective surfaces adapted to accommodate at least one of the material under test and a fluid containing the material under test therebetween;

providing a plurality of regions to one of said first and second reflective surfaces in an array of capturing material elements to form a corresponding plurality of resonant cavities;

applying a capturing material to the capturing material elements in the array on one of the first and second surfaces;

dynamically varying a spacing between said first and second reflective surfaces, to maintain said reflective surfaces in parallel throughout the method;

passing the material under test or flowing the fluid containing the material through the channel;

applying radiation as the fluid flows past or the material under test passes each region to illuminate each region at a wavelength adapted to provide a standing wave of radiation within each said resonant cavity; and

measuring the radiation in each said resonant cavity; and

detecting a change in resonant properties of the standing wave pattern ~~due to an affinity~~ , which is indicative of binding of the material under test to bind to the capturing material at each said resonant cavity.

24. A method for assaying a material under test, the method comprising:

providing a channel bounded by first and second reflective surfaces adapted to accommodate at least one of the material under test and a fluid containing the material under test therebetween;

providing a plurality of regions to one of said first and second reflective surfaces in an array of capturing material elements between said first and second reflective surfaces;

applying a capturing material to the capturing material elements;

dynamically varying a spacing between said first and second reflective surfaces, to maintain said reflective surfaces in parallel throughout the method;

passing the material under test or flowing the fluid containing the material through the channel;

applying radiation as the fluid flows past or the material under test passes each region to illuminate each region at a wavelength adapted to provide a standing wave of radiation within each said resonant cavity; and

measuring the radiation in each said resonant cavity; and

detecting a change in resonant properties of the standing wave pattern ~~due to an affinity~~ , which is indicative of binding of the material under test to bind to the capturing material at each said resonant cavity.

44. An assay system comprising:

first and second reflective surfaces that are structured and arranged to define a space therebetween, the space being adapted to accommodate therebetween a material to be tested;

a plurality of regions in a pattern of an array between said first and said second reflective surfaces, each region defining a resonant cavity between the first and second reflective surfaces therein and having capturing material on at least one reflective surface;

a source of radiation to illuminate each region at a wavelength adapted to provide a standing wave of radiation within each said resonant cavity;

a detector for the radiation in each said resonant cavity and operative to indicate a change in the standing wave pattern, which is reflective of the binding of said material to be tested to the capturing material within each said resonant cavity; and
means for dynamically varying spacing of said first and second reflective surfaces.

45. An assay system comprising:

first and second reflective surfaces that are structured and arranged to define a channel therebetween, the channel being adapted to accommodate a material to be tested;

a plurality of regions in a pattern of an array between said first and said second reflective surfaces, each region defining a resonant cavity between the first and second reflective surfaces therein and having capturing material on at least one reflective surface;

a source of wavelength scanned radiation to illuminate each region at a wavelength adapted to provide a transmission of that radiation within each said resonant cavity representative of said material to be tested bound to the capturing material in each resonant cavity;

a detector for the radiation in each said resonant cavity and operative to indicate ~~the~~ a level of binding of the capturing material to the material to be tested within each said resonant cavity; and

means for dynamically varying spacing of said first and second reflective surfaces.

Allowable Subject Matter

Claims 1-3,5-18,20-25,27-39 and 41-45 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art of record does not teach or fairly suggest the assay systems as claimed in independent claims 1, 2, 44, and 45. Further, the prior art of record does not teach or fairly suggest the methods for assaying a material under test as recited in independent claims 23 and 24. All the remaining claimed depend from these independent claims and are thereby allowable for the same reasons.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments, see pages 13-20, filed September 11th, 2009, with respect to the objection of the specification, drawings, and claims 22 and 27, and the rejection of the claims under 35 USC 112, 2nd paragraph, as well as the rejection of the claims under 35 USC 103(a) have been fully considered and are persuasive. The

objections and rejections of the claims have been withdrawn in view of Applicant's arguments and the amendments made to the specification and claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NEIL TURK whose telephone number is (571)272-8914. The examiner can normally be reached on M-F, 9-630.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NT

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797